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AUTHOR Morgan, Alistair
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ABSTRACT

The point of departure for this article is the title of a book edited by David Fetterman, "Qualitative Approaches to Educational Evaluation--The Silent Scientific Revolution." This article addresses the question of how the shift to a qualitative, phenomenological approach has impinged on research and evaluation in distance education. Three issues that influence the style and approach of such research are identified: (1) the role and influence of educational technology with the assumptions which it embodies about the course design process and the relationship between research and practice; (2) the nature of the organization and the structures within which research and evaluation are conducted; and (3) the individual staff involved, their backgrounds, and their interests. The discussion then focuses on the role and influence of educational technology; qualitative-illuminative studies of learning and phenomenological approaches to research and evaluation; critical theory and action research; international perspectives in research on distance education; and developing programs for research and theory. It is concluded that, although the "silent revolution" identified by Fetterman has not really occurred in distance education, important initiatives are in progress with the development and elaboration of the "new educational technology." Lists of 33 references and 35 Student Research Center Reports are included. (ALF)

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Report No. 35

WHATEVER HAPPENED TO THE SILENT SCIENTIFIC REVOLUTION? ---- RESEARCH, THEORY AND PRACTICE IN DISTANCE EDUCATION

Alistair Morgan

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The **Student Research Centre** is part of the Open University's Institute of Educational Technology. The main work of the Centre is, firstly, to evaluate the Open University's courses and learning materials, and secondly, to carry out research into all aspects of students' experience of learning as adult distant learners. Both qualitative and quantitative methodologies are used in these areas. The aim of the Centre's work is to improve the quality of the Open University's teaching materials and teaching system, and to raise awareness of the effects on students of university policy decisions and of different forms of course provision.

WHATEVER HAPPENED TO THE SILENT SCIENTIFIC REVOLUTION?-------RESEARCH, THEORY AND PRACTICE IN DISTANCE EDUCATION.

Alistair Morgan

Introduction

The point of 'departure' for this article is the title of the recent book edited by David Fetterman (1989) 'Qualitative Approaches to Educational Evaluation----The Silent Scientific Revolution'. I was particularly interested in the suggestion in the title about the idea of a 'silent revolution'. How did this idea relate to my own work in research and evaluation in the Open University? Also how did the idea relate to work at the international level in distance education?

The claim of Fetterman seemed to be particularly timely when I had been involved in methodological controversies in a recent OU project, (The Home Computing Evaluation Project). The issue of debate was not only about qualitative versus quantitative methods, but also about the overall planning of the project. To what extent were we 'collecting the information the university needed' to fulfil the evaluation requirements of the Department of Trade and Industry, who had provided the funds for the computers and how was the evaluation 'brief' to be interpreted? Home computers are a major new feature of OU study, what is the student's experience going to be like? What is the impact on study patterns? What influence do home computers have on issues of inequality? How do home computers in distance education relate to the concept of 'social distance' as described by Evans (1989).

Although a formal document had been prepared as an evaluation proposal, there had been relatively little detailed discussion of the project. However, at an early meeting of the evaluation team, members of staff responsible for the survey research in the Institute of Educational Technology rather suddenly posed the question, 'When do we want to send out the surveys?'---and expecting to get a definite answer. For some of us in the group, it didn't seem at all clear that we even needed any large scale surveys at that stage in the project. We were more concerned to elaborate the crucial questions to address in the evaluation project. How did this project relate to theoretical work for understanding adult learning? It appears that survey methods have an organizational 'momentum' of their own. Needless to say the meeting ended with little agreement.

The meeting described above, linked to Fetterman's (1989), title on 'the silent scientific revolution' initiated some of the initial thinking behind this paper. How are research and evaluation

projects planned? What theoretical basis (if any) provides a grounding for research studies and what is the dominant research tradition? In addressing these questions, the issues for debate lead into developing a sort of social history of research and evaluation in educational technology, and distance education more generally.

Fetterman (1989) draws together a diverse collection of material from what he calls the 'qualitative classics' by Eisner, Patton, amongst others, as well as 'new developments' such as the work on phenomenography of Ference Marton, and places the discussions in a wider paradigmatic context and the thinking of Kuhn (1962)—— that of a silent revolution in evaluation. As Fetterman explains:

> As is the case in many fields of scientific endeavour, educational evaluation is experiencing a change in direction. A critical component of this change is a shift in the paradigms underlying the method and aim of research. A marked shift is taking place in the professional allegiance of evaluators. Increasingly, they are turning away from traditional positivist approaches and towards the acceptance and use of phenomenological or qualitative concepts and techniques.

Fetterman also points out that revolutionary change occurs in many stages from innovation through to acceptance. He suggests that the 'classics' in the volume represent accepted innovations in the field which create an hospitable environment for new developments. (There are many other writers and volumes of work which could be cited as indicative of a paradigmatic shift in research and evaluation in education, however, it was the timeliness of the publication as well as the title, which initiated some of the present thinking.)

This article addresses the question of how this 'revolution' has impinged on research and evaluation in distance education. Has the same sort of revolution occurred? Or is distance education still 'stuck' with approaches to research and evaluation which have long since been discarded by the 'mainstream' education and social sciences? A more polemical sub-title for this article could have been 'Beyond Mindless Data Collection'. However, this article is not intended as a polemic, but rather, a debate about research, theory and practice in distance education.

This article will argue that changes in research approach have occurred to some extent, and have had some influence in distance education, but that in no sense can a 'revolution' really be considered to have occurred. Research and evaluation in distance education seems to embody a number of issues which act as barriers to change.

Certain features of the course design and development process and the distance education organisations, act as barriers or constraints to change. Some specific reference will be made to the British Open University (OU), with which the author is most familiar, but the issues would seem to be relevant to distance education more widely.

There seem to be at least three crucial areas which influence the style and approach to research and evaluation:

(i) The role and influence of educational technology with the assumptions which it embodies about the course design process and the relationship between research and practice.

(ii) The nature of the organisation and the structures within which research and evaluation is conducted.

(iii) The individual staff involved, their backgrounds and interests.

The Role and Influence of Educational Technology

There can be little doubt that educational technology has had (and still does have) a considerable influence in distance education. Educational technology is at the centre of the course planning , design and production process in a large number of institutions which offer courses for off campus students. It has been particularly influential in the Open University, in the UK and also other distance teaching universities.

As educational technology has been central to the course design and production process, it seems to follow that it will have had an important influence on the types of research and evaluation carried out in distance teaching institutions. In discussing what approaches to research and evaluation are likely to be derived from educational technology, it is essential to address the question, "What is educational technology?" This seem to be particularly important as there are many simplistic and caricatured descriptions of educational technology in the literature.

The work of Derek Rowntree (1974, 1982) provides some of the most influential and comprehensive writings in educational technology and also gives insights into how his interpretation of educational technology has changed over the last ten years or so. This work is also important, as it is closely related to the practice of educational technology in the course development work in the Institute of Educational Technology in the OU.

Educational technology is seen as a problem-solving approach to curriculum development. This rational systematic approach to

educational technology has four basic strands: (i) identify purposes, especially in terms of objectives, (ii) develop the necessary learning experiences, (iii) evaluate the effectiveness of the learning activities in achieving purposes, (iv) improve the learning experiences in the light of evaluation (Rowntree, 1974).

In the introduction to the second edition of 'Educational Technology in Curriculum Development' (Rowntree, 1982) there is some brief reference to recent changes in the field. There is mention of knowledge structures, cognitive models of learning and ideas from humanistic theories of Carl Rogers and freedom in learning. However, the basic structure of the book is unchanged. As the author points out, it is the same basic model, although it is 'presented more knowingly'. It sets out educational technology as a technocratic approach to course development. There are 30 pages devoted to objectives. Admittedly, there is a final section entitled 'objections to objectives', but then a further 30 pages on developing objectives. The message seems to be clear, objectives are a basic feature of good distance teaching material. Educational technology is portrayed as set of neutral and value -free procedures. The essence is 'whatever you want to teach we'll help you teach it better'.

The criticisms of objectives, both on empirical grounds and conceptual grounds, that they did not adequately describe what we were trying to develop in our students led to other initiatives. Knowledge structures became the new 'buzz-word' in course design. The difficulties experienced by students would be overcome if teachers and course writers could work out the logical conceptual structure in the academic material and then present this structure to the students. In spite of the claims of this approach, relatively little has been achieved in practice; not surprisingly, in view of the problems of transforming academic discourse into 'knowledge structures'. Again, knowledge structures are another aspect of a rational production system with the emphasis on transmission modes of teaching. Dave Harris (1987) has developed a major critique of the Open University from the approach of critical theory, in 'Openness and Closure in Distance Education'. As the title of the book suggests, it is:

> designed to illustrate how every kind of openness associated with distance education seems to have its opposite side, a tendency to closure, which also has to be considered.—— In developing rational principles of course design intended to provide all applicants equally with the same high quality standard courses, certain other possiblities and outcomes have to be closed off. (Harris, 1987, p3)

The criticisms of the 'explicit pedagogy' of the OU have been expressed succcintly by Harris and Holmes (1976) in an earlier article

which is part of the overall project referred to above; they express it as follows:

> Our point is that many course team academics have resisted the more obvious devices employed by the rational curriculum planners, and have managed to include in their course materials arguments which were not intended to be authoritarian didactic pieces of expert knowledge. Some academics do intend their students to seek personal meanings in the texts, to begin to apply the arguments to their own surroundings and so on. However, given the immoveable nature of the one-way at a distance teaching system, and the strong possibility of a 'hidden curriculum' fostered by the assessment system, such liberating intentions seem unlikely to be realised. The reality of the OU teaching system for students is one where large quantities of printed material arrive which express necessarily abstract and universalised arguments. No dialogue with the writers can be held concerning the personal relevance of these arguments. The only kind of communication with central institution takes place via frequent assignments, which often call for a personal response, while being graded according to impersonal objective criteria (Harris and Holmes, 1976, p84)

This analysis of Harris and Holmes identifies some of the potential problems of distance education, the difficulty of dialogue with students, the assessment system and the way the distance teaching texts tend to be perceived by students as authoritative bodies of knowledge---ie issues of closure in relation to academic discourse. Although these problems may not be as severe as these writers suggest, they seem to be an aspect of the traditional educational technology approach.

A central feature of the educational technology approach is the 'evaluation of the effectiveness of the learning materials in achieving purpose'. Closely linked to this feature of evaluation is the rhetoric which has been claimed for the OU of the self-improving system. Feedback on the efficiency of the learning materials will inform change, as in the engineering models of feedback and change.

A recent publication by Thorpe (1988) on the evaluation of open and distance learning provides a useful collection of procedures, with the aim to encourage practitioners to engage in evaluation. However, this work, on essentially formative evaluation has a somewhat narrow focus. It is still what could be called a 'technified view' of evaluation, grounded in the 'culture' of traditional educational technology. There is no reference to a more critical appraisal of open learning programmes. Also, there is no reference to the micro-

politics and sub-cultures of organisations (Westoby, 1988) and how these issues have a crucial role in the conduct of evaluation and the process of change (Morgan, 1990). The relationship between research, evaluation and practice is seen as unproblematic. This is essentially the 'technical rationality' referred to by Donald Schon (1984). For Schon the notion of technical rationality is an inadequate model of how professionals act in practice and he develops the idea of 'reflection in action' as a more realistic way of understanding practice and how professionals interpret research findings.

In the OU, how was the function of student feedback to be organised? With the large number of students, it is attractive in some respects to make some use of survey methods. Within the Institute of Educational Technology, the Survey Research Department was set up to enable large-scale postal survey questionnaires to be handled routinely. (This function is now carried out in the Student Research Centre, after departmental reorganisation in 1984/5 abolished existing research groups and established three major Centres in the Institute.) Many of original staff working in this area had backgrounds in market-research; and the size of the student population, as well the distant locations of students, made survey methods attractive. Also, much of the research and evaluation in the audio-visual media area has adopted similar methodologies Of course, it is impossible to ignore the size of the student population with policy evalaution, for example,in relation to access to video cassette recorders. And if large scale surveys are to be carried out, an efficient procedure is required.

However, the organisational structures have served to create what could be called 'an hegemony of survey methods'. To put it more polemically, the system makes 'mindless empiricism' very easy! This is not just another round in the qualitative versus quantitative argument. Framed in those terms, the arguments are not very fruitful. Perhaps the most significant distinction is 'intelligent' versus 'unintelligent' research and evaluation, or to express this less polemically, atheoretical rather than theoretically grounded. The criticism is not with survey methods *per se*, but the way in which they are carried out. A vast number of routine surveys may fulfil very short term goals of some administrators to answer specific questions. However, research should not be restricted to such studies, as the findings do not contribute to building up our knowledge base of teaching and learning in distance education.

For example, in IET in the OU, the potential of many of the evaluation studies has not been realised, because they have not built upon one another to further explore key issues of teaching and learning. An example, of the type of result which can be achieved is the work of Partlett and Woodley (1983) on student drop-out. They drew together insightful interpretations of a number of studies

which related together to provide a better holistic understanding of the phenomenon of student drop-out in the OU.

Not all the feedback of students responses to course materials has been carried out by large scale survey research, such as the annual survey of new courses. So for example, there are instances where an IET member working in a course development role will collect and coordinate a diverse range of materials and work with a course team to interpret the data and discuss change. However, this form of working does not have the organisational 'momentum' referred to above, in the sense that the procedures have not become routinised and institutionalised.

There is a clear need to develop a strategic plan for research and evaluation, which is located within a broad theoretical framework, which addresses issues of policy and practice. This focus is needed because both qualitative as well as quantitative studies can be 'mindlessly repeated' in a way which does not contribute to an overall coherence. At present, within the Student Research Centre, in the OU, there is a renewed interest in developing theory for informing and grounding the research and evaluation studies that are carried out. This 'new direction' is discussed further in the final section of this paper.

Although the role of educational technology has been very influential in the OU and other distance teaching institutions, both in determining the nature of the pedagogy and also the style and approach of much of the research and evaluation, there have been a growth of what could be called the 'new educational technology'. There has been work on group processes in course teams, ideological critiques of the teaching of courses in information technology, studies in the qualitative-phenomenological tradition and social historical analyses of course development.

Qualitative-Illuminative Studies of Learning

Over the last two decades or so there has been a steady growth of research in student learning which has adopted a qualitative-illuminative approach. For example, Becker, Geer and Hughes (1968) work on assessment 'Making the Grade' and Miller and Parlett's 'Up to the Mark' (1974) are two early influential studies in this area.

There is also a body of research work which can be broadly located under the field of phenomenography (Marton, 1981). The research, drawn together in 'The Experience of Learning' (Marton, Entwistle, & Hounsell, 1984), provides good examples of the range and nature of the work in this tradition. This work starts from the premise that 'real learning' for understanding, requires learners to change their

ways conceptualising an idea, concept or some aspect of the world around them. This conception of learning is in contrast to learning which is seen as the acquisition of pieces of knowledge and information.

The phenomenological perspective, which Marton and Svensson (1979) have labelled the 'second-order perspective', describes learning from the learner's perspective, or 'from the inside'. This perspective is in contrast to the 'first-order perspective', which describes learning 'from the outside', as represented by experimental studies, psychometrics and traditional evaluation, measuring the achievement of objectives. (There are some broad parallels here between the distinctions of positivism and the interpretive approach made by Carr and Kemmis (1986) although their critique is based on the work of Habermas.)

In relation to distance education, the phenomenological approach to understanding student learning has been developed by Gibbs, Morgan and Taylor (1984) to provide holistic descriptions of how OU students tackle their studies. This work relates together the concepts of orientation to study, conception of learning, approach to study, and learning outcomes, to provide a framework for understanding learning from the learner's perspective. I summarised this work in 'Distance Education' (Morgan, 1984) to help to draw it to the attention of the distance education community. To promote research within what can be loosely termed the 'qualitative-illuminative tradition' seemed particularly important when some writers within distance education have lamented at the lack of a clearly defined paradigm for research (Baath, 1982). Other workers such as Holmberg (1986) argue that distance education is a different discipline in its own right and appear to ignore approaches to research and evaluation which have originated more generally in the educational and social sciences.

Phenomenological approaches to research and evaluation also embody a very different relationship between theory and practice, than the traditional educational technology approach. As Marton and Svensson (1979) explain:

> One line of argument is that the relation between theory and practice is of a 'technical' character. The idea is that from a sufficiently developed theory we should be able to derive the proper course of action in various concrete settings. The rival view implies that the choice of action in every concrete situation must be based on the profound knowledge of and familiarity with the specific circumstances. The choice of action has to be made by those who run the risk and know the conditions--by the participants themselves. Strategic choices can thus never be derived from any general

> formulations. The relation between theory and practice should therefore be of an emancipating character. The theory should raise the level of awareness in the participants and in this way indirectly increase the likelihood of better, more considered, open discussions.

One of the crucial issues to stress is that the relationship between theory and practice is *emancipatory*. How different to that implied by educational technology. In the 'golden era' of educational technology, educational technologists, or course developers operated by drawing on ideas from programmed learning, advised course teams on the use of objectives, self assessment questions and the sequencing of learning materials etc.. The implicit assumption seemed to be that these features are the key ingredients in quality distance learning materials.

Studies from a phenomenological perspective, besides describing and illuminating students' experiences contribute directly to reflecting on practice------to raise teachers (course teams) awareness of what students are really doing as they attempt to learn. For example, aspects of course design and assessment can induce students to adopt surface approaches to study, with corresponding influence on the learning outcomes. These studies also suggest that providing the opportunity for students to become more aware of how they tackle their studies, can serve to facilitate their development as learners.

So to what extent has this type of phenomenogical research developed in distance education? Has the silent revolution as suggested by Fetterman (1989) occurred? There are some recent studies following in this tradition, for example, Holt, Petzall and Viljoen (1989) however, they are few in number. There is certainly not the increase in research studies in distance education that there has been in education in conventional settings, both at school as well as post-compulsory levels. For example, 'Improving Learning: New Perspectives', edited by Ramsden (1989) draws together studies which describe students' conceptions of subject material, and uses this understanding as a basis for improving learning. This work also aims to create a cooperative approach between teachers and researchers, and that research can serve as a bridge between theory and practice.

> Our view of learning implies a pluralistic concern to provide practitioners with tools they can use to improve their students' learning, rather than an absolutist conception of the 'right' and 'wrong' teaching and learning methods. Our view accepts that almost every act of teaching is an act of practitioner---research. There is a real sense in which teachers must in their everyday activities, strive to test

> hypotheses about why children are failing and learn to make judgements on the results of their tests, (Marton and Ramsden, 1989, p283).

Although Marton and Ramsden advocate cooperative research, they do not go as far as the views held by some action researchers of abandoning the distinction of teachers and researchers, they favour a more eclectic approach.

Critical Theory and Action Research

There seem to be indications of new directions in research in distance education from recent work which has been informed by critical theory. As noted earlier, the strength of the influence of educational technology in distance education, has not provided an intellectual climate which has been receptive to the notion of research as critique. So for example the work of Harris (1987) has only fairly recently become recognised within the Open University, itself. Also his work is probably known of in more detail and had more influence outside the OU, rather than amongst researchers and teachers (course teams) within the organisation. Can the approach of critical action research, as outlined by Carr and Kemmis, (1986), become a legitimate line of research in distance education? What are the barriers to this change taking place? Perhaps it is worth pointing out, that although Fetterman, (1989), suggests that a silent revolution has occurred in evaluation, his focus on the American educational community did not include any work originating from a critical perspective.

Based on the critical social science of Habermas, Carr and Kemmis (1986), have attempted to develop the view that emancipatory action research could be a way of relating the perspectives criti al social science to research in education The aim is to develop a critical educational science, in which the focus of research is for education and not about education.

In looking at trends in research in distance education, there are some indications of new directions, breaking out of the influence of educational technology. So for example, Burt (1989) is attempting to develop what he calls a field of inquiry labelled 'Cultural and Ideological Technology' as a form of critique to go beyond the rationality of educational technology which ignores the ideologies which underlying educational debates. As he explains,

> Educational technology in particular, with its attention to means-rationality and its denial of ideology, often seems to turn a blind eye to society.

One of the more important developments is the way Evans and Nation (1989) have located the idea of 'critical reflection' on the intellectual map in distance education. Drawing on work from critical theory and particularly the ideas of Giddens (1984) they have identified reflection as a central focus of learning, and also an approach to research which has the focus of educational change. As Evans and Nation (1989) define critical reflection as follows:

> Critical reflection is the process through which human beings use their analytical powers to assess elements of their lives against their explanatory frameworks (theories). Critical reflection is the precursor to change because, through the recognition of human agency, it encourages people to seek to improve lives in their own terms.

They have interpreted the work of critical theorists in a fairly broad manner, to develop the idea of critical reflection as a 'lens' for looking at research, theory, and practice in distance education. As the authors have remarked in conversation 'you don't have to take the full intellectual journey to Frankfurt' to gain insights from critical theory and the essence our the approach. Within this approach, the aim is to create the notion of a community of researchers and practitioners to engage in critical reflection, so as draw research, theory and practice into closer allegiance. This approach has the potential for integrating the view of research as critique, with studies which have origins in the qualitative--illuminative tradition. The sort of research agenda for distance education which is derived from this basis looks very different from what is the 'dominant paradigm' derived from educational technology.

It is interesting how in Australia where there is a long history of distance education, there appears to be a new interest in research as critique, particularly in focussing on the issues of 'instructional industrialism'. As distance education in Australia is being forced to restructure under Federal directives of efficiency and competition in the market place for students, researchers and practitioners are questioning what are the most appropriate forms for the future of distance education. For example, Campion (1989) drawing on literature from politics and economics debating the crisis in the world economy, is exploring the ideas of Piore and Sabel (1984) in an effort to formulate future strategies. He argues for the notion of 'flexible specialisation' in production in distance education, as an alternative to the dominant mode of 'instructional industrialism'.

Some of the different traditions in research and evaluation outlined have been outlined above. They provide some insights for what a future research agenda could be. To what extent has there been a change at the international level?

The debate so far has looked at how educational technology has been a dominant force in shaping the approach and style of research evaluation in distance education. In the OU for example, certain organisational structures, as well as the individual actors, have created what has been labelled the 'hegemony' of survey methods.

Other approaches to research, phenomenological studies of research in student learning and critical theory and action research have been looked at briefly, to show that these alternatives approaches are represented in distance education, although, these are by no means perceived as mainstream traditions. What are the trends at an international level? There is not space to do detailed review or analysis of the literature, at this stage, so any answer to this question must be regarded as partial. The collection of papers from the most recent ICDE Conference (Sewart & Daniel, 1988), provides one starting point for this brief analysis. Is there any evidence that the 'silent revolution' of Fetterman (1989) is occurring in distance education? The answer would seem to be no. There is a diverse collection of projects clearly located in the experimental and correlational tradition. For example, experimental studies comparing the efficiency of learning through televised instruction, correlations of course features to test scores, aptitude--treatment--interaction studies to mention a few. It seems that the culture of positivism and the research and evaluation originating within this culture is well represented. There are a few studies in the qualitative --illuminative tradition, as well as the use of surveys within the context of lobbying for underprivelged groups, but hardly on the scale to suggest a scientific revolution is occurring.

Looking in the literature more widely, is there a body of 'classic studies' which provide an hospitable environment for new developments? There are some signs that this could be occurring. So for example,there is more of a diversity in research and evaluation than the narrow focus derived from educational technology and quantitative correlational studies. There is increased debate about theory in open and distance learning and a questioning of traditional educational technology, although the changes do not seem to represent a 'revolution' as referred to by Fetterman (1989).

Developing Programmes for Research and Theory.

It was suggested earlier that in the OU, there was a new interest in developing theory as a way to relate studies together. Theory is not to be seen in the predictive sense, as is the case of research in the positivist tradition. Rather, a range of theories, in the general area of adult learning are being drawn together to form a basis for reflection

on research and practice. Theory is also recognised to have a legitimate role in the activities of the Student Research Centre of conducting studies in applied research and development in distance education. Consequently the aims could be described as follows:

> For the Student Research Centre as an Academic Unit within IET: To understand and develop theory in order to improve adult learning and participation in learning opportunities.
>
> For the Student Research Centre as a University Unit: To improve the institution as a promoter/agent of learning opportunities for adults.

[These aims were generated in a Student Research Centre Meeting and are articulated in Calder, (1989)]

Clearly this statement of aims raises the key question of what theory, or theories to utilise and how to relate theory to practice, but these are the subject for another article. However, this seems to be a major new initiative in developing a programme of research and evaluation. These initiatives with a theoretical grounding are providing the intellectual climate for new directions in research and evaluation (Morgan and Farnes, 1990).

Perhaps there are some parallels to the way Carr and Kemmis (1986), see an adequate view of an educational science:

> It must develop theories of educational practice that are rooted in the concrete educational experiences and situations of practitioners and which enables them to confront the educational problems to which these experiences and situations give rise. (p. 215)

In conclusion, from the literature, it seems clear that the silent revolution identified by Fetterman (1989) has not really occurred in distance education. However, important initiatives are in progress. The development and elaboration of the 'new educational technology', which goes beyond the rational-technicist traditional approaches, will provide a location for theory which takes account of the social and political contexts of the learner, teacher and the institution. The new educational technology will provide understandings of the realities of adult learners and how they change and develop. It will also focus on the realities of complex institutions and how the politics and culture of organizations influence educational change.

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